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17

18 Psychosocial experiences of chronic illness in individuals with an intellectual disability: A systematic
19 review of the literature

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36 **Abstract**

37 **Background:** Increased life expectancy has led to an increase in diagnoses of chronic illness in
38 people with an intellectual disability; despite this increase, research about the psychological impact is
39 rare. This review explored the psychosocial experiences of chronic illness in adults with an
40 intellectual disability, revealing potential predictors and moderators of these experiences. **Methods:**
41 Online databases were systematically searched to identify relevant literature, using predefined
42 inclusion criteria. Of the 25,058 titles initially identified, 4 were included, that is, those collecting data
43 on people with an intellectual disability and diagnosed with cancer (n = 2), chronic pain (n = 1) and
44 diabetes (n = 1). **Results:** Narrative synthesis of the data identified six themes, namely, delayed
45 diagnosis, information, communication and understanding, negative psychological consequences,
46 negative physical consequences, social perception and social support. **Conclusions:** There are unmet
47 needs within this population, including a lack of assistance in understanding their illness. A
48 substantial gap in the literature should be addressed through further empirical work.

49
50 **Keywords**

51 chronic illness, intellectual disability, psychosocial needs, systematic review

52
53 **Background**

54 The World Health Organization (WHO, 2012) defines chronic illness as a disease of long
55 duration, generally with a slow rate of progression. It is estimated that chronic illnesses (including
56 cancer that is classified as a chronic illness by WHO) represent 88% of all deaths in the United
57 Kingdom (WHO, 2011); cardiovascular diseases (34%) and cancers (27%) are proportionately the
58 largest causes of death. Receiving a diagnosis of, and living with, a chronic illness is distressing
59 (Gunn et al., 2012; Musselman et al., 2003; Zabora et al., 2001); and in comparison with the general
60 population, individuals with a chronic illness are more likely to suffer from depression and anxiety
61 (Hinz et al., 2010; Rothrock et al., 2010). Psychosocial experiences are being explored more within
62 chronic illness research, with unmet psychosocial needs being highlighted in various populations
63 (Green and Smith, 2004; Harrison et al., 2009; Steed et al., 2003; Swash et al., 2014). Psychosocial

64 needs relate to the individual and their interactions with their present environment (Oxford English
65 Dictionary Online, 2014). Such needs, for instance, support, practical, psychological, physical or
66 information needs, are essential aspects of one's psychological and social well-being in relation to
67 health-care provision (Thewes et al., 2004). Research exploring psychosocial needs has been
68 conducted in a variety of chronic illness populations, including diabetes (e.g. Barnard et al., 2012;
69 Hood et al., 2014), cancer (e.g. Butow et al., 2012; Carlson et al., 2013; Hulbert-Williams et al., 2012)
70 and chronic pain (e.g. Andersen et al., 2014; Jensen et al., 2011). However, there has been a relative
71 paucity of research examining these issues among people with an intellectual disability.

72 The life expectancy of people with an intellectual disability is steadily increasing to a similar
73 rate to that of the general population (Emerson et al., 2014), with some research suggesting that
74 individuals with a mild intellectual disability may have a life expectancy similar to the general
75 population (Puri et al., 1995). As life expectancy is likely to be increasing, so are diagnoses of chronic
76 illnesses within this population (Hanna et al., 2011; Ryan et al., 2011; Tuffrey-Wijne et al., 2007).
77 Whilst there are some indications that life expectancy and diagnoses of chronic illnesses are on the
78 rise, the extent of current knowledge in this area is limited. Thus, the ability to make an accurate
79 estimation of the number of individuals being diagnosed with a chronic illness, and subsequently the
80 proportion of these individuals receiving a diagnosis as a consequence of an increased life expectancy,
81 is problematic.

82 Individuals with an intellectual disability often have impairments in skill areas, including
83 interpersonal communication skills, personal care, reading and knowledge (APA, 2013). These
84 difficulties may disadvantage those with an intellectual disability when accessing health screenings
85 and later diagnosis and treatment services. In the general population, chronic illness care generally
86 follows a self-management framework (McCorkle et al., 2011; Newman, et al., 2004). Whilst health
87 checks for people with an intellectual disability have been shown to be beneficial (Robertson et al.,
88 2012), the self-management framework may not always be successful as people with an intellectual
89 disability may not be aware of, or may ignore, their symptoms to a greater extent than the general
90 population (Turk et al., 2012a) and uptake for health screening appointments is varied (Osborn et al.,

91 2012). Communication barriers and a scarceness of accessible information (Ouellette-Kuntz, 2005;
92 Tuffrey-Wijne et al., 2012; Wilkinson et al., 2011) may also contribute to this disadvantage.

93 Few empirical studies have explored the psychosocial impact of chronic illness on those with
94 an intellectual disability. However, to inform priority areas for future research in this area, it is
95 important to draw current knowledge together to (a) establish what is presently known and (b) identify
96 gaps to inform future research design. This review was designed to identify, evaluate and synthesize
97 literature exploring the psychosocial experiences of chronic illness in adults with an intellectual
98 disability (including pre-diagnosis, diagnosis, treatment, survivorship and self-management phases).
99 As a secondary research question, the review aimed to extract information on potential predictors and
100 moderators of these experiences (e.g. social support and communication impairments) and to identify
101 gaps in current knowledge that need to be addressed.

102

103 **Method**

104 From scoping searches, it was evident there was a paucity of literature. Systematic database
105 searches were developed, therefore, to be sensitive rather than specific, ensuring maximum inclusivity
106 of relevant articles (Petticrew and Roberts, 2006). By reviewing literature across all chronic illness
107 diagnoses, it was anticipated that examples yielded from the management of one illness population
108 could be applied to others (Higgins and Green, 2011).

109

110 ***Inclusion and exclusion criteria***

111 The review was concerned with psychosocial experiences of adults with an intellectual
112 disability and a chronic illness. Standardized inclusion and exclusion criteria were developed as
113 follows: (a) all intellectual disabilities and chronic illness diagnoses were included, ensuring searches
114 were comprehensive; (b) experiences at any time point were considered, including pre-diagnosis (e.g.
115 routine screening), diagnosis, treatment, self-management, illness-free periods, progression,
116 survivorship, palliative care and end of life; (c) child and adolescent samples were not included; (d)
117 work could be retrospective or current; (e) the reporter could be the individual with an intellectual

118 disability or a proxy; (f) qualitative and quantitative studies were included; and (g) studies were not
119 required to use specific outcome measures or measurement tools.

120 Articles were limited to publications in English. Restrictions were not placed on date of
121 publication, as a comprehensive overview of all research, historic and current, was required.

122

123 ***Database searches***

124 Online databases (CENTRAL, Web of Science, Medline, PsychINFO and CINAHL) were
125 searched using three search strings, each including a comprehensive list of relevant terms (chronic
126 illnesses, intellectual disabilities and psychosocial experiences). The online databases were selected in
127 consultation with members of the research team who were experienced in conducting systematic
128 reviews, including for the Cochrane Collaboration (Edwards et al., 2008). Terms for these search
129 strings were identified using the existing literature, among other sources (e.g. Lazarus, 1991; Mencap,
130 2012; WHO, 2010, 2012). Search strings were developed in collaboration with the wider research
131 team, for terms included within the search strings please refer to Appendix 1. Searches took place
132 during December 2012.

133

134 ***Review strategy***

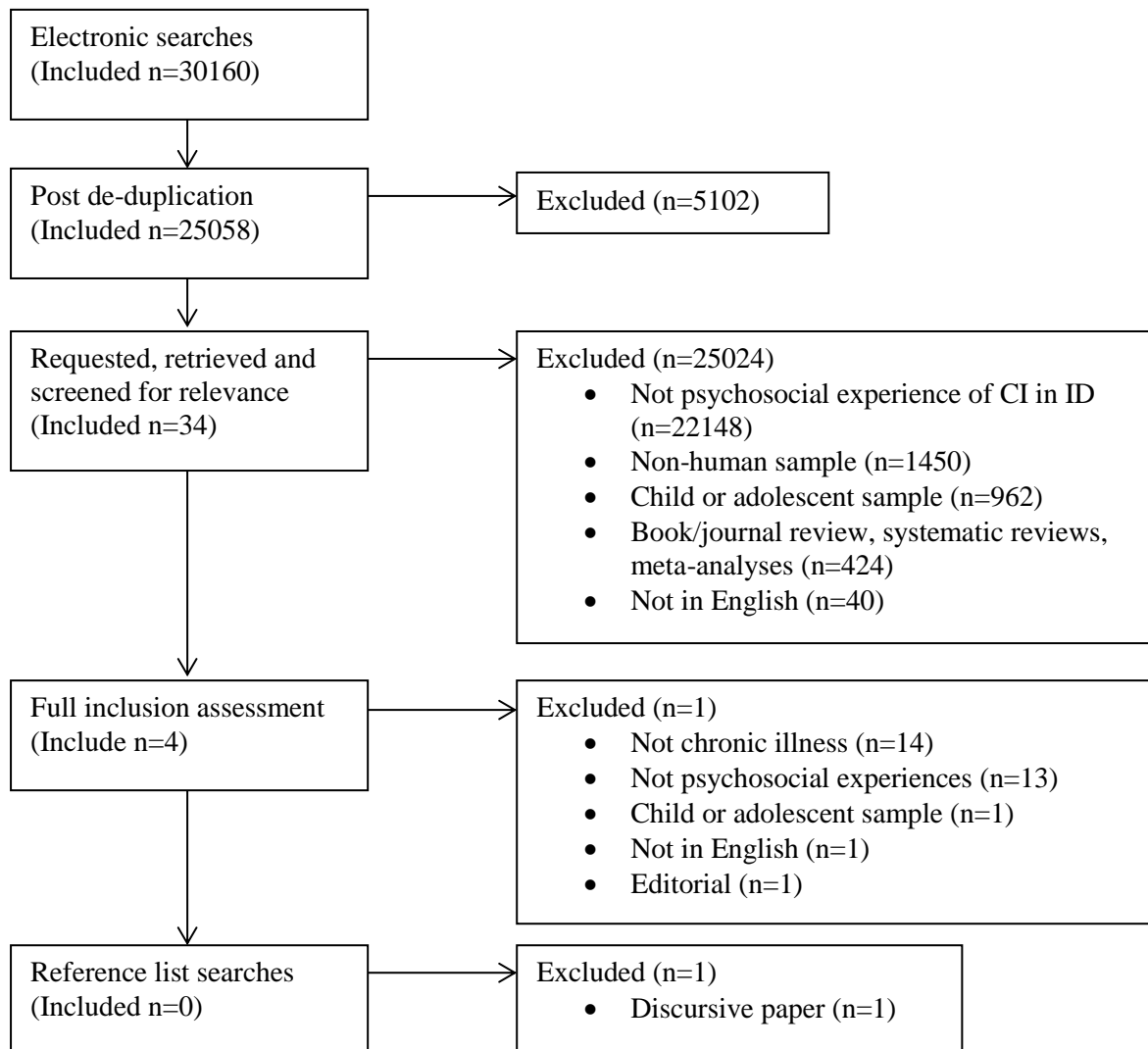
135 From the searches, a total of 30,160 results were returned (see Figure 1). Automatic and
136 manual de-duplication was undertaken. Post de-duplication, titles and abstracts of 25,058 studies were
137 screened for broad relevance by one reviewer (1), with a 5% random sample (1215 abstracts)
138 independently checked by another reviewer (2); this is an accepted practice when a review is large
139 and resources are restricted (Petticrew & Roberts, 2006). Of the 1215 abstracts reviewed by both
140 reviewers (1 and 2), it was agreed that 4 were eligible to undergo full inclusion assessment, along with
141 30 other abstracts identified within the other 95% by the first reviewer.

142 Full articles of these 34 abstracts were assessed for inclusion by two reviewers (1 and 3)
143 independently, and articles that did not meet full inclusion criteria were discarded. Any disagreements
144 were discussed and resolved in consultation with a third reviewer (2). A manual search of the
145 reference lists of included articles was undertaken to locate any relevant articles not identified by

146 electronic searches. One article was identified by these means; however, it was a discursive article and
 147 not eligible for inclusion in the review.

148

149 Fig 1. Flow chart indicating the narrowing of included papers



150

151 ***Data extraction and synthesis***

152 Data extracted from the articles included sample description (details of participants’
 153 intellectual disability and chronic illness diagnoses), study design and key findings. Methodological
 154 quality assessments were also undertaken using the Framework for Assessing Qualitative Evaluations
 155 (FAQE) (Spencer et al., 2003) for qualitative studies, and the Kmet, Lee and Cook (2004) quality
 156 assessment checklist for quantitative studies. Some systematic reviews exclude poor quality studies

157 (Higgins and Green, 2011); however, given the paucity of literature in this area, provided that a study
158 met all inclusion criteria, a poor quality assessment did not warrant automatic exclusion. The four
159 studies included in this systematic review focussed on the psychosocial experiences of those
160 diagnosed with: cancer (n=2) (Cresswell and Tuffrey-Wijne, 2008; Tuffrey-Wijne and Davies, 2006),
161 diabetes (n=1) (Dysch et al., 2012) and chronic pain (n=1) (Lewis et al., 2007). Summaries of these
162 studies are presented in Table 1.

163 Only one study presented quantitative data, thus a narrative literature synthesis was used as
164 they are better suited to reviews of mixed methodology literature than meta-analyses (Popay et al.,
165 2006).

166

167 **Results**

168 When studies were synthesised by psychosocial experience (Table 2), six themes of
169 experience emerged. Studies are numbered (see Table 1) and will henceforth be referred to by these
170 numbers.

171

172 *Delayed diagnosis*

173 Participants noticed a change in their health and sought advice from their general practitioner
174 [1 and 4]. Physical symptoms prior to diagnosis were described, for example, the inability to eat
175 properly due to the swelling tumour [1], a bad odour emanating from the tumour [4] and rapid weight
176 loss [1 and 4]; however, participants were assured that their symptoms were innocuous [1 and 4]. One
177 participant [1] sought advice when the symptoms progressed; however, she was again informed that
178 she was in good health. In contrast, another participant [4] did not seek further medical attention,
179 despite the progressive symptoms, concealing his declining health from his family. Both participants
180 were eventually admitted to hospital in a critical condition [1 and 4].

181 Table 1: Summary table of methodology of included papers

	Authors	Year	Country	Sample size	Sample description	Design	Measures	Data analysis	Quality assessment score
[1]	Cresswell, A., and Tuffrey-Wijne, I.	2008	UK	1	A 30-year-old woman with cerebral palsy and an intellectual disability (unspecified), diagnosed with non-Hodgkin's lymphoma six years previously (unspecified stage): she received chemotherapy, steroids and radiotherapy.	Qualitative	N/A	None presented	FAQE: 3/36 (8.3%)
[2]	Dysch, C., Chung, M.C., and Fox, J.	2012	UK and UAE	4	Four people with mild intellectual disabilities and diabetes (Type 1 or 2). Participants had a mean age of 35 and were diagnosed with diabetes between 9 months and 33	Qualitative	N/A	Interpretative Phenomenological Analysis	FAQE: 30/36 (83.3%)

					years of age (one participant's age at diagnosis not stated within the paper).				
[3]	Lewis, S., Bell, D., and Gillanders, D.	2007	UK	1	A 32-year-old woman with a mild-moderate intellectual disability and chronic pain.	Quantitative	GAS-ID; GDS-LD, adapted FAPS; adapted PRCS	Not specified	Kmet: 5/28 (17.9%)
[4]	Tuffrey-Wijne, I., and Davies, J.	2006	UK	1	A 44-year-old man with cerebral palsy and a mild intellectual disability, diagnosed with advanced penile cancer; he underwent surgery to remove his penis, bladder and bowel.	Qualitative	N/A	None presented	FAQE: 5/36 (13.9%)

182 Table 2: Identification of themes within included papers

	Delayed diagnosis	Information, communication, understanding	Psychological consequences	Physical consequences	Social perception	Social support
[1]	✓	✓	✓	✓	✓	✓
[2]		✓	✓	✓	✓	✓
[3]			✓	✓		
[4]	✓	✓	✓	✓	✓	✓

183

184

185 ***Information, communication and understanding***

186 The use of complex language by health-care professionals when explaining the diagnosis and
 187 treatment options was inhibiting and increased the levels of anxiety [1 and 4]. The complex nature of
 188 chronic illnesses was also challenging for the participants; some individuals attributed side effects to
 189 their recent behaviours rather than to their illness [2]. The use of accessible language both textually
 190 and verbally was conducive to understanding for the participants [1 and 4]. Some doctors accessibly
 191 explained the participant’s diagnosis [4]; however, there was a general lack of accessible
 192 communication from hospital staff [4].

193

194 ***Negative psychological consequences***

195 Uncertainty was experienced about the current situation [1], their mortality [1 and 4] and
 196 whether the illness was lifelong [2]. Confusion about the condition [2] and distress about being
 197 different to others [2] were experienced by some participants, and one participant [4] reported that he
 198 concealed his emotions from his family. In one study [3], the negative psychological consequences of
 199 having a chronic illness were addressed and reduced; improvements were found in the Glasgow
 200 Anxiety Scale for people with an intellectual disability (GAS-ID; baseline = 38; month 2 = 26; month

201 4 = 18) and Glasgow Depression Scale for people with a learning disability (GDS-LD; baseline = 17;
202 month 2 = 24; month 4 = 10). Scores for resourcefulness within the Pain-Related Control Scale
203 (PRCS) improved (baseline = 3; month 2 = 2; month 4 = 6) and the score for helplessness was
204 maintained (PRCS; baseline = 4; month 2 = 5; month 4 = 4). Having faith [4] was also reported to be
205 associated with reduced negative psychological consequences.

206

207 *Negative physical consequences*

208 Physical consequences of treatment were hair loss [1] and altered sense of taste [1], and also
209 included restrictions caused by the illness, such as monitoring blood sugar and following strict dietary
210 controls [2] and undergoing physiotherapy to regain mobility post-surgery [4]. Due to the lasting
211 physical effects of surgery, one participant [4] was unable to climb stairs and thus was unable to
212 continue living in his home. It was found that post-intervention, one participant [3] was more
213 physically able and active, less fearful of physical activity (Fear and Avoidance Pain Scale: baseline =
214 24; month 2 = 19; month 4 = 14) and had improved sleep.

215

216 *Social perception*

217 Participants were concerned about how others perceived the effects of their treatment, for
218 example, illness management behaviours could be misinterpreted as drug misuse [2] and a side effect
219 of treatment, vomiting in public, could be viewed as the individual being intoxicated [4]. Some
220 participants were placed in older age wards or homes [1 and 4], which in turn had negative
221 consequences on participants as neither felt that it was the right environment for them. One participant
222 [1] reported that she was verbally abused by another patient, as the other patient did not understand
223 her situation.

224

225 *Social support*

226 One participant [4] had feared family members' reactions to his diagnosis but was being
227 supported by them. Another participant [1] was unable to see friends whilst she was undergoing

228 treatment, despite the lack of physical engagement with them she still felt supported. In contrast to
229 this, the participants in another study [2] were aware of their need for support but often resented it.

230

231 **Discussion**

232 ***Review Findings in a Broader Context***

233 Overall, the findings were relatively consistent between diagnoses, with findings within most
234 themes overlapping significantly. This signals that although the diagnosis, subsequent treatments and
235 consequences differ, the psychosocial impact of the illnesses is somewhat similar.

236 ***Delayed diagnosis.*** These findings correspond with the previous research. A delay in
237 diagnosis may significantly impact the successful diagnosis and effective treatment of illness (Ashing-
238 Giwa et al., 2010; Turk et al., 2012a). It has been found that discussing intimate topics with people
239 with an intellectual disability can be uncomfortable for both the person asking the questions and the
240 individual with an intellectual disability (Turk et al., 2012b), potentially leading to unmet information
241 needs and impacting successful and timely diagnosis. People with an intellectual disability may also
242 fall victim to ‘diagnostic overshadowing’, whereby health-care professionals make false assumptions
243 that symptoms are not due to a physical complaint but as a result of their intellectual disability (Reiss
244 et al., 1982); it is possible that this tendency was at play in studies [1 and 4]. Considering the
245 psychosocial impact of delayed diagnoses, experiencing a diagnostic delay has been found to lead to
246 psychological distress in the general population (Risberg et al., 1996).

247 ***Information, communication and understanding.*** These findings are consistent with the
248 wider literature, as it has been found that accessible information is not always available for those with
249 an intellectual disability (Ouellette-Kuntz, 2005; Tuffrey-Wijne et al., 2012; Wilkinson et al., 2011);
250 this can exacerbate anxiety, fear and distress (Tuffrey-Wijne et al., 2010) as was the case within
251 studies [1 and 4]. Chronic illness terminology is difficult to understand (Makaryus and Friedman,
252 2005); for those with an intellectual disability such terminology is likely to be even more challenging,
253 potentially leading to substantial misunderstandings and unmet information needs. Whilst there is a
254 plethora of chronic illness information available in the public arena (e.g. leaflets, websites and
255 information centres), the information provided may not be accessibly written, thus leaving people

256 with an intellectual disability unable to understand it (O'Regan and Drummand, 2008). Although it
257 was found that participants did not always understand their diagnosis and the consequences of it [2],
258 the subsequent provision of accessible information and communication assisted understanding [1 and
259 4]. Within the wider literature, it has been suggested that simple language (Tuffrey-Wijne and
260 McEnhill, 2008; Turk et al., 2012a), pain indication screenings (Zwakhalen et al., 2004) and pictorial
261 aids (Goodsell and Scarborough, 2006; Nind, 2008; Tuffrey-Wijne and McEnhill, 2008) may enable
262 successful communication with those with an intellectual disability. Bromley et al. (1998) suggested
263 that a combination of pictorial aids and pain indication screenings is most beneficial.

264 ***Negative psychological consequences.*** Receiving a chronic illness diagnosis is a distressing
265 experience (Gunn et al., 2012; Musselman et al., 2003; Zabora et al., 2001). All articles within this
266 review found that the participants were experiencing negative psychological consequences of their
267 illness. People with a chronic illness have been found to feel guilt, shame (Person et al., 2009),
268 responsibility (Mak et al., 2007) and embarrassment for having the illness and being different to
269 others (Conrad et al., 2006); these feelings were evident within the articles in this review. A review of
270 psychological adjustment to chronic illness suggests that patients should engage in selfmanagement
271 strategies and express their emotions (de Ridder et al., 2008). However, this may not always be
272 successful within an intellectual disabilities population, it has been found that those with an
273 intellectual disability may express emotions in an unfamiliar way (Adams and Oliver, 2011); this may
274 impact their psychological adjustment to a chronic illness diagnosis and the appropriate response by
275 health-care teams.

276 ***Negative physical consequences.*** Symptomatology is inevitably similar for those with and
277 without an intellectual disability; however, they may present particular problems for those with an
278 intellectual disability; disability, for instance, not fully understanding the cause of the physical
279 consequences and attributing them to unrelated events [2]. Whilst it is entirely possible that such
280 instances may occur for those without an intellectual disability, conclusions cannot be drawn without
281 further exploration into this area. Such misunderstandings about physical consequences may impede
282 the individual's ability to fully recognize their diagnosis, obstructing acceptance. It has been found

283 that acceptance is an important stage in the illness trajectory and is related to psychological well-being
284 (Karademas et al., 2009; Lewko et al., 2007).

285 Previous research has shown that the physical consequences of chronic illnesses and related
286 treatments can lead to increased levels of anxiety, stress and depression (Katon, 2003), which may in
287 turn lead significantly to more chronic illness symptoms being reported by the individual in question
288 (Katon et al., 2007).

289 ***Social perception.*** It has been found that having a chronic illness can be stigmatizing
290 (Earnshaw and Quinn, 2012); for instance, if the person is required to self-administer medication in
291 public (Schabert et al., 2013). Within this review, perceived negative social perceptions as a result of
292 diagnoses and treatment side effects were apparent within three of the articles [1, 2 and 4]. It is
293 possible that there is an additional stigma present because of having an intellectual disability (Beart,
294 2005; Cooney et al., 2006); this stigma has been found to be detrimental to the wellbeing of those
295 with an intellectual disability (Jahoda et al., 2010). It is not yet clear as to how the two forms of
296 stigma interact and whether chronic illness stigma is worse in those with an intellectual disability than
297 within the general population; this area requires further exploration.

298 ***Social support.*** Communication and social support are important moderators of chronic
299 illness adjustment (Stanton et al., 2013). Individuals with an intellectual disability do not always have
300 someone available for this (Tuffrey-Wijne et al., 2006, 2012). Whilst participants in three of the
301 studies were receiving support, it was sometimes not sufficient [1], resented [2] or increased anxiety
302 [4]. Social support has been found to be an important factor in psychological adjustment to chronic
303 illness (White et al., 1992); often support is sought through peer (Embaldeniya et al., 2013; Flynn et
304 al., 2013) and online support groups (van Uden-Kraan et al., 2008). It is possible that such avenues of
305 support are not as readily available and accessible for those with an intellectual disability (Lippold
306 and Burns, 2009), and this could lead to further feelings of isolation.

307

308 ***Predictors and moderators***

309 In one study [1], it was found that the social support received was a moderator of negative
310 emotions, with the participant highly valuing the support she received. Within the general population,

311 it has been found that perceived social support moderates the relationship between cardiovascular
312 disease and depression (Greco et al., 2013). Additionally, the participant [1] stated that having faith
313 lessened the negativity that came with her cancer diagnosis. Similarly, in the general population,
314 spirituality has been found to assist adjustment to chronic pain (Büssing et al., 2009).

315 Within this review, only one article [3] actively attempted to decrease the negative
316 psychosocial experiences of chronic pain; this was a case study and as such it is imperative that future
317 research employs a larger sample when exploring potential moderators and interventions.

318

319 *Methodological summary and critique of included papers*

320 The quality of qualitative articles was assessed using the FAQE (Spencer et al., 2003).
321 Articles would score highly on the FAQE if it was clear how researchers reached their conclusions,
322 and findings should be contextualized in relation to the existing, and future, research. The quality of
323 the discussion of limitations, study design rationale, sampling strategy and how recruitment and data
324 collection were carried out also impact the FAQE score. Finally, it is important to have a clear
325 narrative to the article, employing reflexivity and providing a clear explanation of the research
326 process. Using the Kmet, Lee and Cook (2004) quality assessment checklist for quantitative research,
327 articles should outline a clear objective, the study design should be clear and appropriate and outcome
328 measures should also be clearly defined and justified in order to score highly. Additionally, analytic
329 methods, sample characteristics, estimates of variance and results should be described in sufficient
330 detail to fully inform the reader. Lastly, conclusions should be fully supported by the results.

331 **Study design.** Both qualitative and quantitative methods were used; two qualitative articles [1
332 and 4] were purely descriptive accounts, in the case-study tradition, and did not present any
333 substantial data analysis. Such publications serve to highlight the issue and are often a first step in
334 developing impetus in researching a topic in intellectual disabilities (cf. Hulbert-Williams and
335 Hastings, 2008). Whilst simply having data published in any form is of great importance, there are
336 few robust conclusions to be drawn from the case study designs. The one qualitative study that
337 undertook data analysis [2] was of good quality as assessed by the FAQE (Spencer et al., 2003) and
338 was reported to be of high standard. Whilst one study [3] reported quantitative results, it did not report

339 the analysis methods undertaken as part of the research, similarly effect sizes and significance levels
340 were not reported; and this makes determining the weighting of the findings problematic.

341 The quality of the articles varied (see Table 1), with three articles [1, 3 and 4] receiving scores
342 of less than 20%; had these articles been excluded, only one would remain. This highlights a need for
343 more, high-quality, research to be conducted in this area; with increased confidence in the results of
344 empirical research, further advances can be made in practice.

345 **Sampling.** All included studies had small samples, with three [1, 2 and 4] pertaining to one
346 participant, and the remaining article [3] involving four participants. Whilst the findings do have
347 implications for research, policy and practice, without substantial sample sizes and replication studies,
348 it is difficult to influence policy and practice and to make practical use of the information gleaned
349 from the research. Small sample sizes can also inhibit the extent of exploration within a study [2]. In
350 one study [2], caregivers withdrew participants but the reasons for withdrawal are not discussed; data
351 relating to reasons for withdrawal should be collected in order to inform future methodological
352 designs.

353 **Data collection.** All articles received ethical approval from the appropriate bodies, and
354 informed consent was obtained prior to the commencement of the research. In two articles [1 and 4],
355 participants waived their right to anonymity, and in the other two articles [2 and 3], participants were
356 given pseudonyms.

357

358 ***Methodological critique of this systematic review***

359 Only four studies were identified for inclusion in this review, with a total sample of seven
360 participants; whilst this is fewer than expected, and does limit the generalizability of the results from
361 the review, it emphasizes the need for more empirical research being conducted within the area.

362 The search terms were collaboratively devised by all members of the research team, with
363 attention being paid to inclusivity of terms; the researchers made every effort to ensure that all
364 relevant terms were included within the search strings. It is however possible that some degree of bias
365 may have operated when devising these terms.

366 Conducting a systematic review within an emergent field can call attention to an absence of
367 research, facilitating further exploration (Petticrew and Roberts, 2006); whilst few studies were
368 reviewed, a substantial gap has been highlighted as well as the need for further investigation.

369

370 ***Recommendations for future research***

371 The review highlights a substantial gap in our knowledge of how people with an intellectual
372 disability respond and adjust to diagnosis of a chronic illness, that is, further exploration of this topic
373 would be beneficial, particularly, studies exploring a comprehensive range of type and severity of
374 intellectual disability. It would also be interesting and helpful to those working in the health-care
375 setting to discover what the specific needs of those with an intellectual disability are, exploring
376 whether the standard support received (e.g. health education and clinical and social support) is
377 fulfilling the needs of those with an intellectual disability or whether more needs to be done to achieve
378 this. Further exploration of currently available information sources would also be warranted,
379 potentially leading to suggestions for future improvements. Possessing a more coherent understanding
380 will enable appropriate services and resources to be provided to fully meet the needs of people with an
381 intellectual disability and a chronic illness.

382 Whilst research exploring the nature of psychosocial experiences in this population is always
383 valuable, the articles within this review were of variable standard, making it difficult to fully
384 appreciate these important findings. As such, it is imperative that there is a consistent high-quality
385 research exploring this area further, and interventional research that attempts to reduce the effects of
386 such experiences is arguably of most value. It is also important to understand the effectiveness of such
387 interventions so that not only the best services are provided but ineffective interventions are not
388 implemented. It is essential that people with an intellectual disability are involved in the design of the
389 intervention to ensure that they are relevant and accessible (Nind, 2008). Not only is it important that
390 the research is of high quality, but it is also crucial that the reporting of results is of the highest
391 possible standard. The transparent reporting of analysis methods, effect sizes and significance levels
392 should be included so that the weight of the findings can be fully established and concrete conclusions
393 can be drawn.

394

395 ***Implications for practice, care and support provision***

396 Whilst only little was found within this review, new ideas and research questions have been
397 discovered. It is imperative that health-care professionals are mindful of the Mental Capacity Act
398 2005 and ensure that all individuals are helped to fully understand their diagnosis, the consequences
399 of it and any treatment options that may be available to them. With the appropriate support (e.g.
400 simple language and visual stimuli), many people with an intellectual disability, who may initially be
401 deemed to not have capacity to consent, will be enabled to play an active role in their treatment
402 experience. As a matter of standard practice, reasonable adjustments should be made in accordance
403 with the Equality Act 2010; this is to ensure that the experience is no more difficult than it would be
404 for someone without an intellectual disability. It is evident that the lack of accessible information
405 conveyed both verbally and textually is distressing for those with an intellectual disability and can
406 lead to confusion about their illness. It is, therefore, vital that information is provided in a form that is
407 most understandable to the individual; this may vary from person to person. An adapted needs
408 assessment, as is commonly used within the general population (Webster et al., 2003), should be
409 explored, adapted and implemented among the population with intellectual disabilities.

410

411 ***Conclusions***

412 This review has highlighted the paucity of empirical research being conducted into the
413 psychosocial experiences of people with an intellectual disability and a chronic illness. Such research
414 is being continually conducted within a general population sample; however, those with an
415 intellectual disability are often overlooked. In general population psychosocial oncology, for instance,
416 there is an emphasis on listening to the needs of the patient group and providing services dependent
417 upon the findings (Corner et al., 2006). People with an intellectual disability are under-represented
418 and very little is known about their experiences of chronic illness. It is imperative that we understand
419 chronic illness experiences from a first-hand perspective in order to provide a high standard of care to
420 this population. Additionally, it is of great importance that the data collected in collaboration with
421 people with an intellectual disability, as it has previously been found that information provided by

422 caregivers is often inconsistent with the information from the participant themselves (Turk et al.,
423 2012a).

424

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